

AngularJS Workshop

RVA.js | May 2014



2 Agenda

- Introduction
- App Walkthrough
- API and Extensions
- Angular Concepts
- Code!



3 Introduction



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CapTech Digital Solutions

<http://capte.ch/digital>

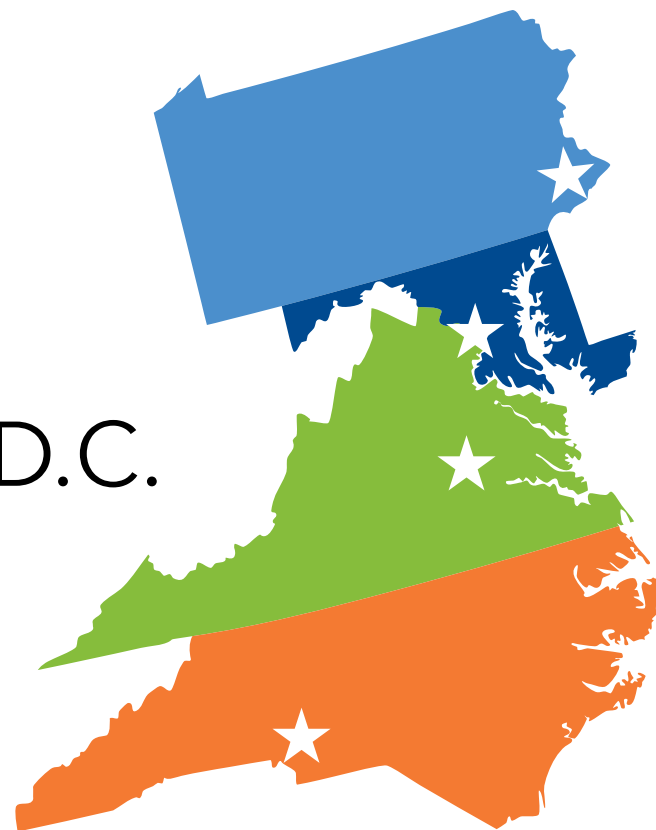


4 CapTech Overview

At CapTech, we design, manage and integrate information technology solutions for America's most respected businesses. With practice areas in **IT management consulting**, **systems integration** and **data management**, we possess all the expertise of better-known national firms.

Locations

- Richmond
- Charlotte
- Philadelphia
- Washington, D.C.
- National



Employment

- Over **425** salaried employees, with an average of **9+** years consulting experience

Results

- Multi-digit revenue growth since start in 1997
- Focus on Fortune 500 and state government
- A Top 10 "Best Firm to Work For" by *Consulting Magazine* (2013)
- Solutions across Financial Services, Healthcare, State Government, and Retail sectors



5 App Walkthrough - Goals

- Angular Basics With Real Patterns
- Real API
- Not Lame



6 App Walkthrough

CREATE AWESOME STUFF WITH THE WORLD'S GREATEST COMIC API

The Marvel Comics API allows developers everywhere to access information about Marvel's vast library of comics—from what's coming up, to 70 years ago.



7 API and Extensions

- `http://character-list.herokuapp.com/api/characters/[:id]`
- `http://matthewkesler.com/character-list/css/main.css`
- `http://github.com/matthewkesler/character-list`
- `https://docs.angularjs.org/guide`

Extension Ideas:

- Use full Marvel API - <http://developer.marvel.com/>
- Implement Character List Filter - | `filter`
- Custom Directive



8 Angular Concepts

App.js

- Top level module
- Used with `ng-app=` to bootstrap application
- Common place to configure routes

```
angular.module('CharacterList', ['ngRoute'])  
  .config(['$routeProvider', function($routeProvider) {
```



9 Angular Concepts

Routes

- `$route` component
- Watches the URL and tries to match to a configured route

```
$routeProvider.  
  when("/characters", {  
    templateUrl: "partials/characters.html",  
    controller: "CharacterListController",  
    //...
```



10 Angular Concepts

Modules

- Keep code organized into reusable components
- Declaratively bootstrap

```
// declare a module  
var myAppModule = angular.module('myApp', []);
```



11 Angular Concepts

Dependency Injection

- `$injector` creates components and provides them when necessary
- Pervasive throughout Angular
- Allows for highly testable components

```
someModule.factory('greeter', function($window)
{
    // ...
});
```

```
someModule.factory('greeter', ['$window', function(renamed$window) {
    // ...
}]);
```



12 Angular Concepts

Scopes

- Hierarchical execution contexts
- The “glue” between controllers and views
- Allows for view-agnostic controllers

```
function MyController($scope) {  
    $scope.greeting = 'Hello';  
}
```

```
<div ng-controller="MyController">  
    Greeting is: {{greeting}}  
</div>
```



13 Angular Concepts

Directives

- Markers in the DOM that attach behavior to elements
- Set of built in directives
- Can create custom directives

```
<table class="character-list">  
  <tr ng-repeat="character in characters">
```



14 Angular Concepts

Services

- Reusable components that are shared via DI
- Lazily instantiated singletons
- Service/Provider/Factory

```
var myModule = angular.module('myModule', []);  
myModule.factory('serviceId', function() {  
    var serviceInstance;  
    //factory function body that constructs serviceInstance  
    return serviceInstance;  
});
```



15 Angular Concepts

\$http

- Communication with remote services
- Based on \$q's deferred/promise APIs
- \$resource

```
$http({method: 'GET', url: '/someUrl'}).  
  success(function(data, status, headers, config) {  
    // this callback will be called asynchronously  
    // when the response is available  
  }).  
  error(function(data, status, headers, config) {  
    // called asynchronously if an error occurs  
    // or server returns response with an error status.  
  });
```



16 Angular Concepts

Controller

- JS function used to augment the scope
- Sets initial state and adds behavior

```
myApp.controller('GreetingController', ['$scope',  
function($scope) {  
    $scope.greeting = 'Hola!';  
}]);
```



17 Get Coding!

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